

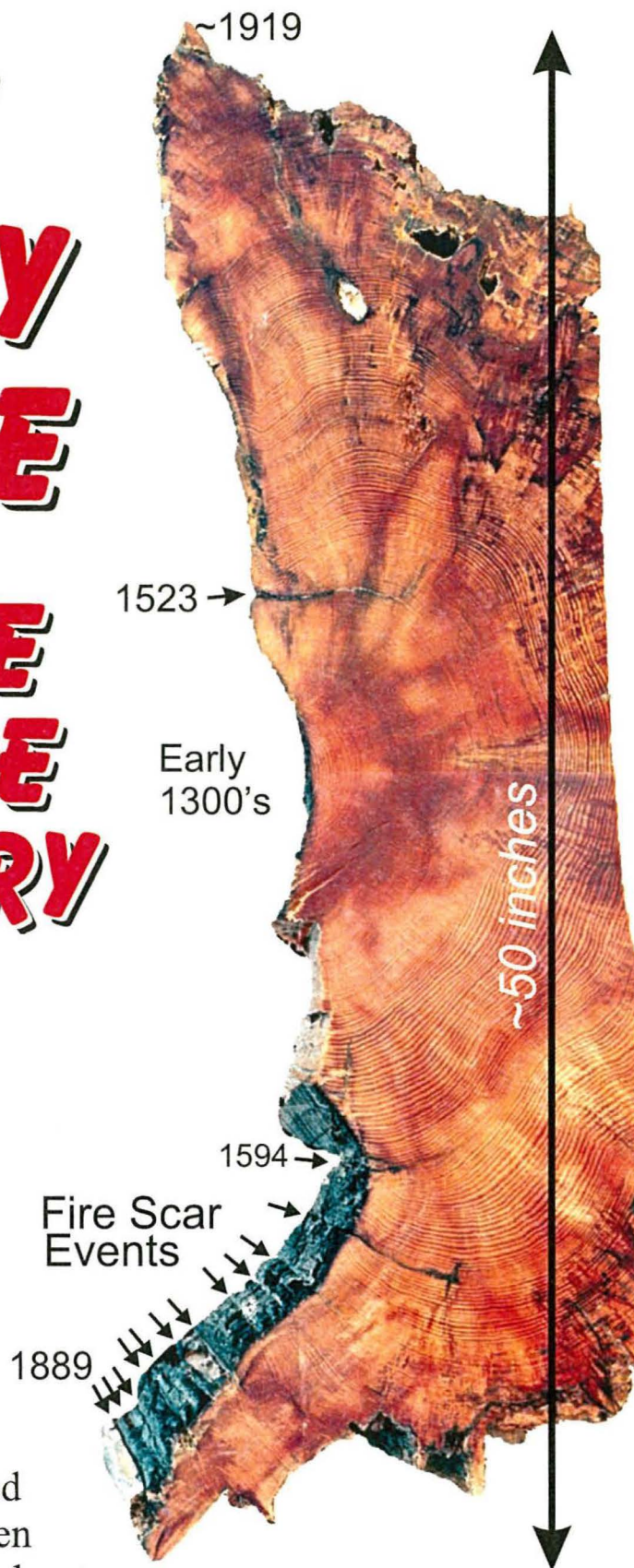
RMRS  
MISC

# THE STORY TREE

## A SLICE OF FIRE HISTORY

The Story Tree, a cross-section from the stump of an ancient ponderosa pine, was found in the mountains near Missoula, Montana.

Scars show that the Story Tree survived at least 13 fires between 1523 and 1889, a fire about every 30 years. Other fires may have occurred without scarring the tree.





## How old is the Story Tree?

Trees record their history in growth rings and scars. A wide ring records a year of good growth; a narrow ring shows a year of stress. The Story Tree has nearly 600 growth rings. They show times of stress and also times of vigorous growth.

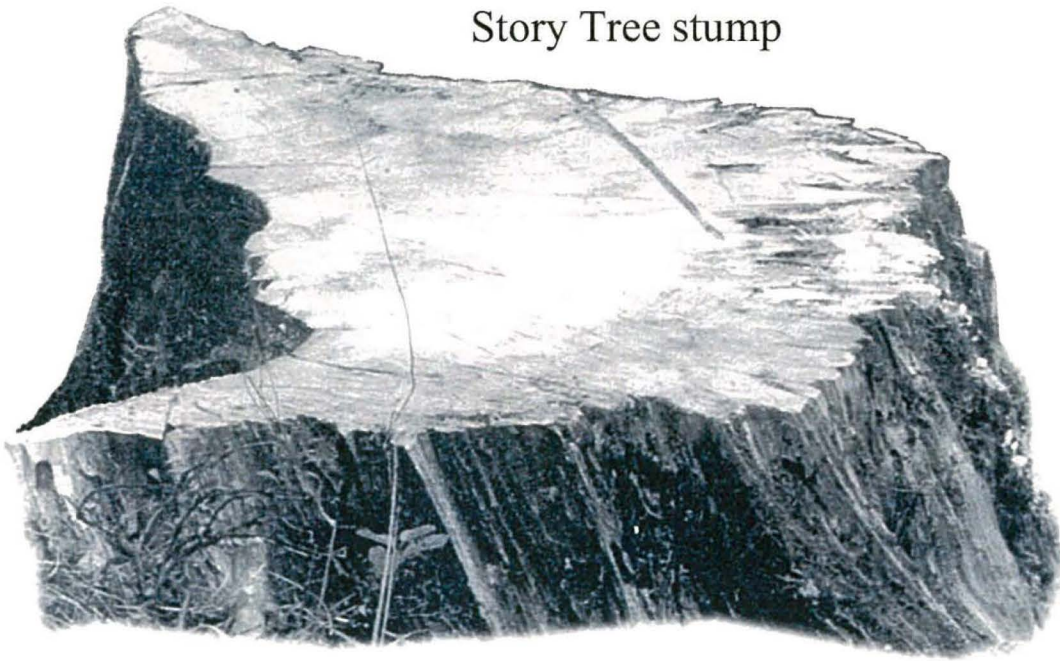
The Story Tree was an old, half-rotted stump when it was discovered. How long had the stump been there? Scientists compared the fire scar pattern on the Story Tree with that of a nearby living tree. By matching the history of the two trees from 1777 to 1889, they determined that the Story Tree died in 1919, a year when fire scarred the living tree. So the Story Tree probably germinated in the early 1300s. Its exact date of origin is uncertain because the tree's center has burned away.

Prior to 1900, repeated fires kept the forest around the Story Tree open, with large, tall trees, as shown in this 1909 photo from the Bitterroot National Forest.



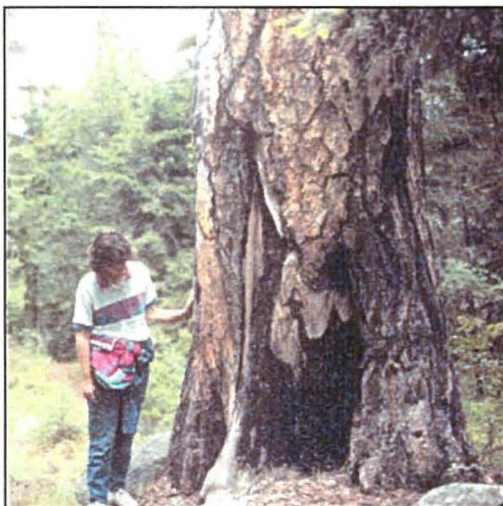


Story Tree stump



## How do fire scars form?

Old ponderosa pines have thick bark and foliage high above the ground so they usually survive fires that burn on the forest floor. Such fires often blacken and kill part of the tree's outer wood. After a fire, new wood grows at the edge of the damaged area. After many fires, a black, triangular scar often forms at the base of the trunk. This is called a fire scar or "cat face."



"Cat faces"





## What's the next chapter in the Story?



Fire has been kept out of the forest around the Story Tree for nearly 90 years. Without fire, large, old ponderosa pines and larches are declining, and young Douglas-firs are increasing, as this photo shows.

Dense vegetation provides fuel for severe fires. It acts as a ladder, letting flames reach from the forest floor into the crowns of even the tallest trees.



Scientists are seeking ways for us to keep old-growth forests that need fire. The history of the Story Tree and other fire-scarred trees forms the foundation for this search.

